

CLAIMS

1. A process for production of a chlorinated polyolefin comprising a step of melting and kneading a polyolefin and then molding it to obtain a solid, a step
5 of pulverizing the solid into powder having a mean particle size of no greater than 500 μm , and a step of chlorinating the powder.

2. A process for production of a chlorinated polyolefin according to claim 1, wherein the chlorinating
10 step further comprises a first step of chlorination at above the crystal melting start temperature and more than 10°C below the crystal melting peak temperature of the polyolefin starting material as determined by DSC, a second step of interrupting the chlorine supply and
15 performing heat treatment by heating to a temperature which is higher than 5°C below the crystal melting peak temperature, and a third step of rechlorination at a temperature above the crystal melting start temperature of the chlorinated polyolefin after the heat treatment
20 step.

3. A process for production of a chlorinated polyolefin according to claim 1 or 2, wherein the polyolefin is polyethylene.

4. A process for production of a chlorinated
25 polyolefin according to claim 3, wherein the polyethylene is linear low-density polyethylene.

5. A process for production of a chlorinated polyolefin according to claim 3 or 4, wherein the density of the polyethylene is 0.90-0.93.

30 6. A process for production of a chlorinated polyolefin according to any one of claims 3 to 5, wherein the polyethylene is polyethylene with a weight-average molecular weight (M_w) and number-average molecular weight (M_n) ratio (M_w/M_n) of no greater than 3.0 as measured by
35 gel permeation chromatography.

7. A chlorinated polyolefin produced by a process according to any one of claims 1 to 6, wherein the

chlorinated polyolefin has a crystal heat of fusion of no greater than 30 J/g according to DSC.

8. A chlorinated polyolefin according to claim 7, wherein the chlorine content is 15-45 wt%.

5 9. A chlorinated polyolefin according to claim 7 or 8, wherein the elongation based on a tensile test is 1500% or greater, and the glass transition temperature is no higher than -25°C.

10 10. A chlorinated polyolefin according to any one of claims 7 to 9, wherein the chlorinated polyolefin is chlorinated polyethylene.

15 11. A chlorinated polyolefin crosslinkable composition comprising 100 parts by weight of a chlorinated polyolefin according to any one of claims 7 to 10, 0.5-20 parts by weight of an acid acceptor, 10-80 parts by weight of a reinforcer, 0.5-10 parts by weight of a crosslinking agent and 5-70 parts by weight of a plasticizer.

20 12. A crosslinked chlorinated polyolefin obtained by crosslinking a chlorinated polyolefin crosslinkable composition according to claim 11.

25 13. A crosslinked chlorinated polyolefin according to claim 12, wherein the temperature at which the relative modulus (RM) = 2 by a cold flex test is no higher than -25°C.

14. A crosslinked chlorinated polyolefin according to claim 12, wherein the temperature at which the relative modulus (RM) = 5 by a cold flex test is no higher than -40°C.

30 15. A crosslinked chlorinated polyolefin according to claim 12, wherein the temperature at which the relative modulus (RM) = 10 by a cold flex test is no higher than -45°C.

35 16. An automobile boot or hose employing a crosslinkable composition or crosslinked polyolefin according to any one of claims 11 to 15.

17. An industrial hose, sheet or packing employing

a crosslinkable composition or crosslinked polyolefin
according to any one of claims 11 to 15.